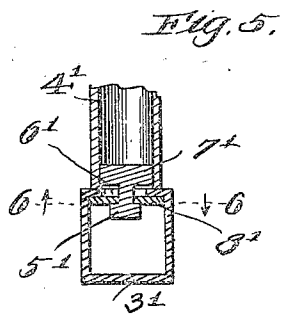
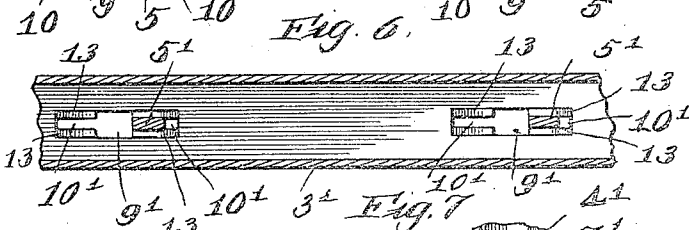
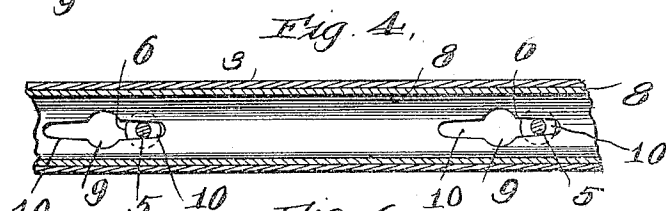
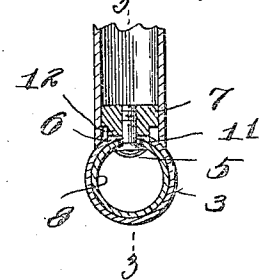
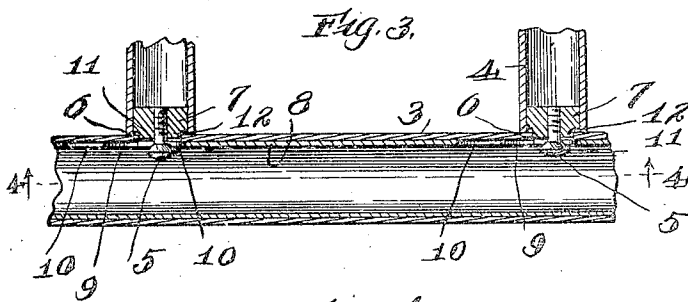
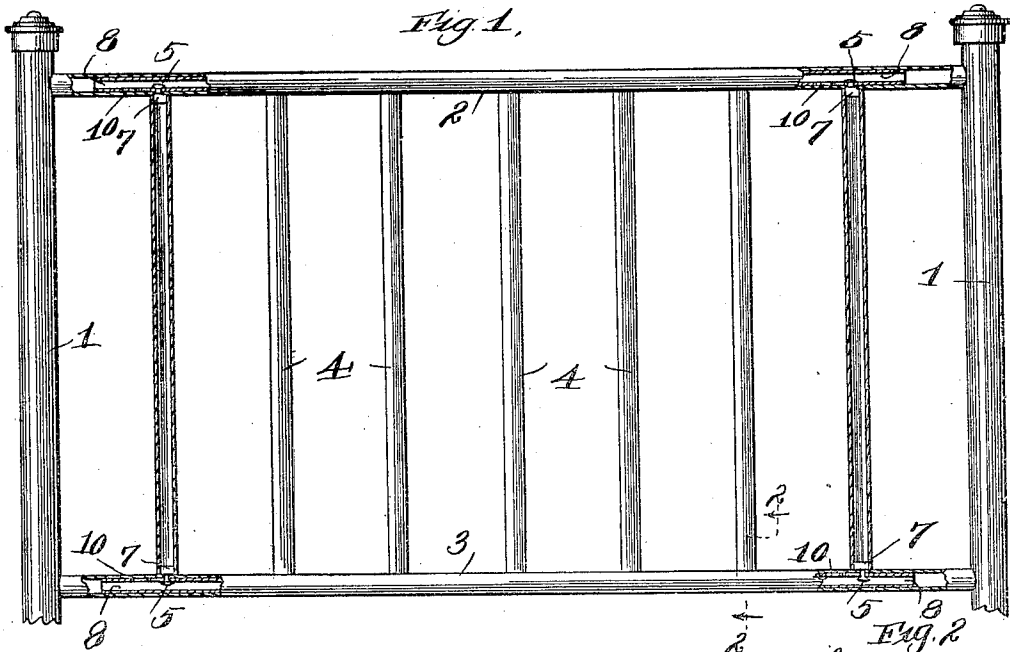


R. F. SAWITZKE, E. J. YATES & J. M. ADAMS.
METAL BEDSTEAD.

APPLICATION FILED AUG. 17, 1909.

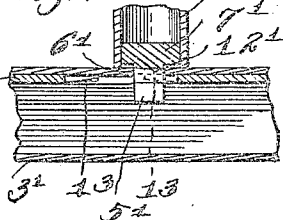
958,322.

Patented May 17, 1910.



Witnesses:

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UNITED STATES PATENT OFFICE.

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METAL BEDSTEAD.

958,322.

Specification of Letters Patent.

Patented May 17, 1910.

Application filed August 17, 1909. Serial No. 513,323.

To all whom it may concern:

Be it known that we, RICHARD FRANK SAWITZKE, EDWIN J. YATES, and JOHN M. ADAMS, all citizens of the United States, and residents of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Metal Bedsteads, of which the following is a specification.

10 This invention relates to bedsteads.

The object of the invention is to provide new and improved means for connecting the members of a bedstead, particularly the members forming the head and foot of a bedstead, which will be simple, strong and durable; which will permit said members to be quickly and conveniently connected and disconnected; and which will be entirely inclosed and concealed when the parts are connected.

20 A bedstead of our invention comprises the various features and details of construction hereinafter described and claimed.

In the accompanying drawing, in which
25 our invention is fully illustrated,—Figure 1 is an end view of the head or foot of a bedstead embodying our invention, partly in section. Fig. 2 is an enlarged sectional view on the line 2—2 of Fig. 1. Fig. 3 is a fragmentary sectional view thereof on the line 3—3 of Fig. 2. Fig. 4 is a sectional view on the line 4—4 of Fig. 3; and Figs. 5, 6 and 7 are views substantially similar to Figs. 2, 3 and 4, respectively, illustrating a
35 slightly modified form of construction.

Referring now to the drawings, A designates, as a whole, an end of a metal bedstead embodying our invention, comprising posts 1, top and bottom transverse frame members 2 and 3 connecting said posts and upright members 4 connecting said transverse members 2 and 3. The transverse members 2 and 3 are hollow, while the members 4 may be either hollow or solid. The
45 transverse members 2 and 3 may be connected to the posts 1 by means similar to those hereinafter described for connecting the upright members 4 to said transverse members 2 and 3, or in any other desired manner. The ends of the upright members
50 4 are made to conform to the exterior surfaces of the transverse members 2 and 3,

against which they are designed to bear, being cut out or curved concavely where said transverse members 2 and 3 are round, and
55 being square where said transverse members are plane. Secured to the ends of the upright members 4 are keys 5, consisting, as shown, of headed studs, which are adapted to project through holes or openings 6
60 formed in the transverse frame members 2 and 3, said keys and the holes or openings 6 being of such size that when said keys are inserted through said holes or openings the ends of the upright members 4 will bear
65 against the exterior surfaces of the transverse members 2 and 3 around the holes 6 therein. Where the members 4 carrying the keys 5 are hollow, as shown in the drawings, said studs are preferably connected thereto
70 by plugs 7 secured, as by soldering, in the ends of said members 4. The keys 5 may be either made separate from the plugs 7 and secured therein by means of suitable screw threads on the shanks thereof adapted to
75 engage correspondingly screw threaded holes or openings in said plugs, as shown in Figs. 1 to 4, inclusive, of the drawings, or they may be formed integral with said plugs, as shown in Figs. 5, 6 and 7 of the drawings, 80 in which said keys and plugs are designated, respectively, by the reference numerals 5¹ and 7¹, our invention contemplating equally either construction. The keys 5 having been inserted through their respective holes or
85 openings 6, are adapted to be secured therein, so as to connect the members 4 to the members 2 and 3 to form a rigid structure by means of key plates 8 adapted to be inserted lengthwise into the transverse members 2
90 and 3. The key plates 8 are shaped to conform to the inner sides or surfaces of said transverse members 2 and 3, so as to rest closely in contact therewith when inserted therein. As shown in Figs. 1 to 4, said key
95 plates 8 consist of tubes or hollow members fitted to the bores of the transverse members 2 and 3. Our invention, however, contemplates equally the use of key plates which bear against one side only of said hollow
100 members, as shown in Figs. 5, 6 and 7 of the drawings, in which the key plates are designated by the reference numeral 8¹.

Formed in the key plates 8 are key open-

ings comprising relatively large sections 9 and relatively small elongated sections 10 at one or both sides thereof. The enlarged sections 9 of said key openings are of substantially the same size as the holes or openings 6 in the transverse members 2 and 3 adapted to receive the keys 5 and are the same distance apart, from center to center, as said openings 6 in said transverse members, thus providing for bringing said enlarged sections 9 of said key openings into register with said holes or openings 6 to provide for inserting the keys 5 simultaneously through the holes or openings 6 and said enlarged sections 9 of said key openings. The relatively narrow sections 10 of said key openings are preferably somewhat wider than the thickness of the shanks of the keys 5 where they join the enlarged sections 9 of said key openings, the sides thereof converging toward the outer ends of said sections 10, so that said sections 10 will become gradually narrow at points remote from the sections 9 of said key openings. To cooperate with the key openings in the key plates 8, the under sides of the heads of the keys 5 are inclined or beveled, as shown at 11.

In assembling a bedstead embodying our invention, the upright members 4 are first connected to the transverse members 2 and 3, which is done in the following manner:—The key plates 8 are first inserted into the transverse members 2 and 3 in position to bring the large sections 9 of the key openings therein into register with the holes or openings 6 in said transverse members. The heads of the keys 5 are then inserted through the openings 6 and the enlarged sections 9 of the key openings in said key plates 8, the relation being such that the beveled under sides of the heads of said keys will extend below the inner surfaces of said key plates. The key plates 8 are then driven or forced endwise to bring the beveled under surfaces 11 of the heads of the keys 5 into firm engagement with the edges of the contracted sections 10 of said key openings, the convergence of the sides of the sections 10 of said key openings operating to exert a wedging action on the heads of the keys, which will operate, in an obvious manner, to draw the ends of the upright members 4 into firm engagement with the transverse members 2 and 3. The transverse members 2 and 3 are next connected to the posts 1, which, as stated, may be done in any desired manner. To prevent displacement of the upright members 4, due to the action of the key plates 8 as they are driven or forced endwise to effect engagement of the relatively narrow sections 10 of the key openings in said key plates with the heads of the keys 5, the members 4 to which the keys 5 are secured

preferably comprise projections 12 at their ends of substantially the same size as the openings 6 in the hollow members 2 and 3, the relation being such that when the ends of the upright members 4 bear against the transverse members 2 and 3, said projections will engage the holes 6 in said transverse members. Said projections will preferably be formed on the plugs 7, as shown in Figs. 1 to 4 of the drawings, but they may be formed by suitably shaped portions of the shanks of the keys 5, as shown at 12¹, Figs. 5, 6 and 7, which are of substantially the same size as the holes or openings 6 in the transverse frame members 2 and 3, the relation being such that when the ends of the upright members 4 bear against the transverse members 2 and 3, said projections 12 of said keys 5 will be in engagement with the holes or openings 6 in said transverse members.

In order that the key plates 8 may lock the keys 5 simultaneously and rigidly, it is of course necessary that all of the keys engaged by each key plate shall project the same distance from the ends of the members 4 to which they are secured and that the key plates shall be of the same thickness and the relatively small sections 10 of the key openings of the key plates shall be of the same size. This can be conveniently effected by the use of suitable gages.

The shanks of the keys 5 may either be round in cross section, as shown in Figs. 1 to 4, or may be elongated, as shown in Figs. 5, 6 and 7. The use of keys, the shanks of which are elongated in cross section, is of advantage where said keys are formed by means of screw studs to prevent turning thereof, which would operate to vary the adjustment thereof and thus prevent the key plates from engaging the same in the manner intended. Said construction is also of advantage where the ends of the members in which said keys are secured are square and bear against flat or plane sides of the other connected member, as turning of the members carrying said studs will thereby be prevented.

Instead of the means heretofore described for effecting a wedging action of the key plates on the keys, we have, in Figs. 5, 6 and 7 of the drawings shown a modified construction for this purpose. As shown in said Figs. 5, 6 and 7, this is effected in the following manner:—The under surfaces of the heads of the studs 5¹ are preferably made flat and the inner surfaces of the key plates 8¹ at the edges of the relatively narrow sections 10¹ of the key openings therein are inclined, as shown at 13, so that the thickness of said key plates will increase gradually from the relatively large sections

9¹ of said key openings toward the outer ends of the relatively narrow sections 10¹ thereof. Thus, as said key plates are forced endwise, they will exert a wedging action on the heads of said keys, which will operate to draw the members 4¹ into firm bearing with the transverse member to which they are connected.

We claim:—

10 1. A metal bedstead comprising a hollow member and members connected to said hollow member, the means for connecting said members comprising keys on said members other than said hollow member and a key plate adapted to be inserted inside of said hollow member, said hollow member being provided with holes adapted to receive said keys, and said key plate being provided with openings adapted to interlock with said keys, substantially as described.

2. A metal bedstead comprising a hollow member and members connected to said hollow member, the means for connecting said members comprising keys on said members other than said hollow member and a hollow key plate fitted to and adapted to be inserted inside of said hollow member, said hollow member being provided with holes adapted to receive said keys, and said key plate being provided with key openings adapted to interlock with said keys, substantially as described.

3. A metal bedstead comprising a hollow member and members connected to said hollow member, the means for connecting said members comprising keys on said members other than said hollow member and a key plate adapted to be inserted inside of said hollow member, said hollow member being provided with holes adapted to receive said keys, and said key plate being provided with key openings each comprising a relatively large section adapted to permit the passage therethrough of a key and a relatively narrow section or sections engagement of the sides of which with said keys is adapted to be effected by movement of said key plate relatively to said hollow member, substantially as described.

4. A metal bedstead comprising a hollow member and members connected to said hollow member, the means for connecting said members comprising keys on said members other than said hollow member and a key plate adapted to be inserted inside of said hollow member, said hollow member being provided with holes adapted to receive said keys, and said key plate being provided with key openings each comprising a relatively large section adapted to permit the passage therethrough of a key and a relatively narrow section or sections engagement of the sides of which with said keys is adapted to

be effected by movement of said plate relatively to said hollow member or members, the relation being such that movement of said key plate to effect interlocking of said key opening or openings therein with said keys will produce a wedging action on said keys, substantially as described.

5. A metal bedstead comprising a hollow member and members connected to said hollow member, the means for connecting said members comprising keys formed by headed studs, the under sides of the heads of which are inclined or beveled, and a key plate adapted to be inserted inside of said hollow member, said hollow member being provided with holes adapted to receive the heads of said keys and said key plate being provided with key openings each comprising a relatively large section adapted to permit the passage therethrough of the head of a key and a relatively narrow section or sections adapted to receive the shank thereof, the width of said relatively narrow section or sections decreasing toward the outer end or ends thereof, substantially as described.

6. A metal bedstead comprising a hollow member and members connected to said hollow member, the means for connecting said members comprising keys on said members other than said hollow member, formed by headed studs, the shanks of which are larger in one direction than in the other and a key plate adapted to be inserted inside of said hollow member, said hollow member being provided with holes adapted to receive the heads of said keys and said key plate being provided with key openings each comprising a relatively large section adapted to permit the passage therethrough of the head of a key and a relatively narrow section or sections wider than the smaller dimension of the shanks of said keys and narrower than the larger dimension thereof, substantially as described.

7. A metal bedstead comprising a hollow member and members connected to said hollow member, the means for connecting said members comprising keys on said members other than said hollow member, and a key plate adapted to be inserted inside of said hollow member, said hollow member being provided with holes adapted to receive said keys and said key plate being provided with key openings adapted to interlock with said keys, and projections on said members to which said keys are secured of substantially the same size as the holes in said hollow member and adapted to engage said holes, substantially as described.

8. A metal bedstead comprising hollow members and members connected to said connecting said hollow members, the means for connecting said members comprising keys

on said members other than said hollow members and key plates adapted to be inserted within said hollow members, said hollow members being provided with holes
5 adapted to receive said keys and said key plates being provided with key openings adapted to interlock with said keys, substantially as described.

In testimony, that we claim the forego-

ing as our invention, we affix our signatures 10 in presence of two subscribing witnesses, this 10th day of Aug., A. D. 1909.

RICHARD F. SAWITZKE.

EDWIN J. YATES.

JOHN M. ADAMS.

Witnesses:

JOSEPH ADAMS,

BERTRAM F. ADAMS.